

IN THE  
UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s): David Arthur James Webb, Jr. et al.

Confirmation No.:

Application No.:

Examiner:

Filing Date:

Group Art Unit:

Title: METHOD AND APPARATUS FOR DETERMINING AVAILABILITY OF A QUEUE WHICH  
ALLOWS RANDOM INSERTION

Commissioner for Patents  
PO Box 1450  
Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT

Sir:

This Information Disclosure Statement is submitted:

- ☒ under 37 CFR 1.97(b), or  
(Within three months of filing national application; or date of entry of national application; or before  
mailing date of first office action on the merits; whichever occurs last)
- ☐ under 37 CFR 1.97(c) together with either a:  
☐ Statement under 37 CFR 1.97(e), or  
☐ a \$180.00 fee under 37 CFR 1.17(p), or  
(After the CFR 1.97 (b) time period, but before final action or notice of allowance, whichever occurs first)
- ☐ under 37 CFR 1.97 (d) together with a:  
☐ Statement under 37 CFR 1.97(e)(1) or (2), and  
☐ a \$180.00 fee set forth in 37 CFR 1.17(p).  
(Filed after final action, a notice of allowance, on or before payment of the issue fee)

Please charge to Deposit Account **08-2025** the sum of \$0.00. At any time during the  
pendency of this application, please charge any fees required or credit any overpayment to Deposit  
Account **08-2025** pursuant to 37 CFR 1.25.

☒ Applicant(s) submit herewith Form PTO 1449 - Information Disclosure Statement together with  
any required copies of patents, publications or other information of which applicant(s) are aware, which  
applicant(s) believe(s) may be material to the examination of this application and for which there may be  
a duty to disclose in accordance with 37 CFR 1.56.

☐ A concise explanation of the relevance of foreign language patents, foreign language publications  
and other foreign language information listed on PTO Form 1449, as presently understood by the  
individual(s) designated in 37 CFR 1.56 (c) most knowledgeable about the content is given on the  
attached sheet, or where a foreign language patent is cited in a search report or other action by a  
foreign patent office in a counterpart foreign application, an English language version of the search  
report or action which indicates the degree of relevance found by the foreign office is listed on form PTO  
1449 and is enclosed herewith.

It is requested that the information disclosed herein be made of record in this application.

"Express Mail" label no. EV 214952660 US

Date of Deposit 2/13/04

I hereby certify that this is being deposited with the  
United States Postal Service "Express Mail Post  
Office to Addressee" service under 37 CFR 1.10 on  
the date indicated above and is addressed to:  
Commissioner for Patents, Alexandria, VA  
22313-1450.

By Margaret A. Norcutt

Typed Name: Margaret A. Norcutt

Respectfully submitted,

Hamilton, Brook, Smith & Reynolds, P.C.

By Mary Lou Wakimura  
Mary Lou Wakimura

Attorney/Agent for Applicant(s)  
Reg. No. **31,804**

Date: 2-13-04

**PATENT APPLICATION**

Sheet 1 of 4

<p><b>FORM PTO-1449</b></p> <p><b>LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT</b></p> <p align="center">(Use several sheets if necessary)</p>	<p>ATTY. DOCKET NO. <b>200304950-2</b></p>	<p>APPLICATION NO.</p>	<p>CONFIRMATION NO.</p>
<p>APPLICANT <b>David Arthur James Webb, Jr. et al.</b></p>			
<p>FILING DATE                      GROUP</p>			

**REFERENCE DESIGNATION                      U.S. PATENT DOCUMENTS**

EXAMINER INITIAL		DOCUMENT NUMBER	PUBLICATION DATE	NAME	Pages, Columns, Lines Where Relevant Passages or Figures Appear
	1A	5,872,946	02/16/99	Narayan et al.	
	1B	5,155,843	10/13/92	Stamm et al.	
	1C	4,847,755	07/11/89	Morrison et al.	
	1D	4,229,790	10/21/80	Gilliland et al.	
	1E	6,542,987 B1	04/01/03	Fischer et al.	
	1F	5,870,578	02/09/99	Mahalingaiah et al.	
	1G	6,115,807	09/05/00	Grochowski	
	1H	6,112,019	08/29/00	Chamdani et al.	
	1I	5,627,983	05/06/97	Popescu et al.	
	1J	5,822,559	10/13/98	Narayan et al.	
	1K	6,182,210 B1	01/30/01	Akkary et al.	

**FOREIGN PATENT DOCUMENTS**

		DOCUMENT NUMBER	PUBLICATION DATE	NAME OF PATENTEE OR APPLICANT	Pages/Columns/Lines Where Relevant Passages/Figures Appear	Check if Translation attached
	1L					
	1M					
	1N					
	1O					
	1P					

**OTHER REFERENCES (including Author, Title, Date, Pertinent Pages, etc.)**

	1Q	Keller, J., "The 21264: A Superscalar Alpha Processor with Out-of-Order Execution," Paper present at the Microprocessor Forum on October 22-23, 1996
	1R	Gieseke, Bruce A. et al., Digital Semiconductor, Digital Equipment Corporation, "A 600MHz Superscalar RISC Microprocessor with Out-Of-Order Execution," ISSCC97/Session 10/High-Performance Microprocessors/Paper FA 10.7, IEEE International Solid-State Circuits Conference, 176-177, 451, (1997).
	1S	Farrell, J.A. and Fischer, T.C., "Issue Logic for a 600-MHz Out-of-Order Execution Microprocessor," J. Solid-State Circuits 33(5):707-712 (1998).

EXAMINER	DATE CONSIDERED
----------	-----------------

FORM PTO-1449

LIST OF PATENTS AND PUBLICATIONS FOR  
APPLICANT'S INFORMATION DISCLOSURE  
STATEMENT

(Use several sheets if necessary)

ATTY. DOCKET NO.

200304950-2

APPLICATION NO.

CONFIRMATION NO.

APPLICANT

David Arthur James Webb, Jr. et al.

FILING DATE

GROUP

## REFERENCE DESIGNATION

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	PUBLICATION DATE	NAME	Pages, Columns, Lines Where Relevant Passages or Figures Appear
	2A	6,148,394	11/14/00	Tung et al.	
	2B				
	2C				
	2D				
	2E				
	2F				
	2G				
	2H				
	2I				
	2J				
	2K				

## FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	PUBLICATION DATE	NAME OF PATENTEE OR APPLICANT	Pages/Columns/Lines Where Relevant Passages/Figures Appear	Check if Translation attached
	2L					
	2M					
	2N					
	2O					
	2P					

## OTHER REFERENCES (including Author, Title, Date, Pertinent Pages, etc.)

	2Q	Scott, A.P., et al., "Four-Way Superscalar PA-RISC Processors," J. Hewlett-Packard 1:1-9 (August 1997).
	2R	Farrell, J.A. and Fischer, T.C., "Issue Logic for a 600-MHz Out-of-Order Execution Microprocessor," J. Solid-State Circuits 33(5):707-712 (1998).
	2S	Gwennap, Linley, "Digital 21264 Sets New Standard," Microdesign Resources, Microdesign Report (October 28, 1996).

EXAMINER

DATE CONSIDERED

FORM PTO-1449

LIST OF PATENTS AND PUBLICATIONS FOR  
APPLICANT'S INFORMATION DISCLOSURE  
STATEMENT

(Use several sheets if necessary)

ATTY. DOCKET NO.

200304950-2

APPLICATION NO.

CONFIRMATION NO.

APPLICANT

David Arthur James Webb, Jr. et al.

FILING DATE

GROUP

## REFERENCE DESIGNATION

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	PUBLICATION DATE	NAME	Pages, Columns, Lines Where Relevant Passages or Figures Appear
	3A				
	3B				
	3C				
	3D				
	3E				
	3F				
	3G				
	3H				
	3I				
	3J				
	3K				

## FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	PUBLICATION DATE	NAME OF PATENTEE OR APPLICANT	Pages/Columns/Lines Where Relevant Passages/Figures Appear	Check if Translation attached
	3L					
	3M					
	3N					
	3O					
	3P					

## OTHER REFERENCES (including Author, Title, Date, Pertinent Pages, etc.)

	3Q	A Tour of the P6 Microarchitecture [online], [retrieved on 1999-03-10]. Retrieved from the Internet < URL:http://eecad.sogang.ac.kr/AboutSite+ Others/Others/intel/procs/p6/p6white/p6white.htm> .
	3R	A 56-Entry Instruction Reorder Buffer [online], [retrieved on 1999-03-10]. Retrieved from the Internet URL:http://www.hp.com/ahp/framed/technology/micropro/micropro/pa-8000/docs/56entry.html> .
	3S	Fischer, T. and Leibholz, D., "Design Tradeoffs in Stall-Control Circuits for 600MHz Instruction Queues," Paper presented at the IEEE International Solid-State Circuits Conference (February 1998).

EXAMINER

DATE CONSIDERED

**PATENT APPLICATION**

Sheet 4 of 4

<p><b>FORM PTO-1449</b></p> <p><b>LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT</b></p> <p align="center">(Use several sheets if necessary)</p>	<p>ATTY. DOCKET NO. <b>200304950-2</b></p>	<p>APPLICATION NO.</p>	<p>CONFIRMATION NO.</p>
<p>APPLICANT <b>David Arthur James Webb, Jr. et al.</b></p>			
<p>FILING DATE                      GROUP</p>			

**REFERENCE DESIGNATION                      U.S. PATENT DOCUMENTS**

EXAMINER INITIAL	DOCUMENT NUMBER	PUBLICATION DATE	NAME	Pages, Columns, Lines Where Relevant Passages or Figures Appear
	4A			
	4B			
	4C			
	4D			
	4E			
	4F			
	4G			
	4H			
	4I			
	4J			
	4K			

**FOREIGN PATENT DOCUMENTS**

DOCUMENT NUMBER	PUBLICATION DATE	NAME OF PATENTEE OR APPLICANT	Pages/Columns/Lines Where Relevant Passages/Figures Appear	Check if Translation attached
4L				
4M				
4N				
4O				
4P				

**OTHER REFERENCES (including Author, Title, Date, Pertinent Pages, etc.)**

4Q	Kessler, R.E., Compaq Computer Corporation, "The Alpha 21264 Microprocessor," IEEE Micro 24-36 (March-April 1999).
4R	Liebholz, Daniel and Razdan, Rahul, Digital Equipment Corporation, "The Alpha 21264: A 500 MHZ Out-of-Order Execution Microprocessor," from Compcon February, 1997 Proceedings.
4S	Popescu, V. et al., "The Metaflow Architecture," IEEE Micro, Vol. 11, Issue 3, June 1991, pp. 10-13, 63-73.

EXAMINER	DATE CONSIDERED
----------	-----------------